

SEQUENCE LISTING



<110> HOVANESSIAN, Ara
BRIAND, Jean-Paul
MULLER, Sylviane
KRUST, Bernard
SVAB, Josette
SAID, Elias

<120> NOVEL SYNTHETIC PEPTIDE VACCINES FOR HIV: THE CBD
EPITOPE AS AN EFFECTIVE IMMUNOGEN TO ELICIT BROADLY
NEUTRALIZING ANTIBODIES AGAINST HIV

<130> B5602A - JAZ/KN (I.PASTEUR & CNRS)

<140> US10/820,816

<141> 2004-04-09

<150> EP03290919.4

<151> 2003-04-11

<160> 21

<170> PatentIn Ver. 2.1

<210> 1

<211> 9

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: caveolin
binding motif in which Xaa is any amino acid

<220>

<221> VARIANT

<222> (2)..(5)

<223> Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Met,
Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro

<220>

<221> VARIANT

<222> (7)..(8)

<223> Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Met,
Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro

<400> 1

Trp Xaa Xaa Xaa Xaa Trp Xaa Xaa Trp

1

5

<210> 2

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: caveolin
binding domain corresponding to amino acids 619 to
633 of HIV-1

<400> 2
Leu Glu Gln Ile Trp Asn Asn Met Thr Trp Met Gln Trp Asp Lys
1 5 10 15

<210> 3
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: caveolin
binding domain corresponding to amino acids 662 to
676 of HIV-2

<400> 3
Leu Thr Pro Asp Trp Asn Asn Met Thr Trp Gln Glu Trp Glu Arg
1 5 10 15

<210> 4
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: caveolin
binding domain corresponding to amino acids 604 to
633 of HIV-1

<400> 4
Cys Thr Thr Ala Val Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser Leu
1 5 10 15

Glu Gln Ile Trp Asn Asn Met Thr Trp Met Gln Trp Asp Lys
20 25 30

<210> 5
<211> 26
<212> PRT

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: caveolin
binding domain corresponding to amino acids 651 to
676 of HIV-1

<400> 5
Cys His Thr Thr Val Pro Trp Pro Asn Asp Ser Leu Thr Pro Asp Trp
1 5 10 15

Asn Asn Met Thr Trp Met Gln Trp Asp Lys
20 25

<210> 6
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: caveolin
binding domain corresponding to amino acids 651 to
676 of HIV-2

<400> 6
Cys His Thr Thr Val Pro Trp Pro Asn Asp Ser Leu Thr Pro Asp Trp
1 5 10 15
Asn Asn Met Thr Trp Gln Glu Trp Glu Arg
20 25

<210> 7
<211> 30
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: caveolin
binding domain corresponding to amino acids 604 to
676 of HIV-1

<400> 7
Cys Thr Thr Ala Val Pro Trp Asn Ala Ser Trp Ser Asn Lys Ser Leu
1 5 10 15
Glu Gln Ile Trp Asn Asn Met Thr Trp Gln Glu Trp Glu Arg
20 25 30

<210> 8
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Caveolin
binding motif

<400> 8
Trp Asn Asn Met Thr Trp Met Glu Trp
1 5

<210> 9
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Caveolin
binding motif

<400> 9
Trp Asn Asn Met Thr Trp Gln Glu Trp
1 5

<210> 10
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: C-20 peptide
scaffolding domain of caveolin from amino acids 82
to 101 of caveolin-1

<400> 10
Asp Gly Ile Trp Lys Ala Ser Phe Thr Thr Phe Thr Val Thr Lys Tyr
1 5 10 15

Trp Phe Tyr Arg
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<210> 11
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Variant of SEQ
ID No. 2 in which Xaa is any amino acid that can be added at the
N-terminal or C-terminal of the sequence. The maximum number of these
added amino acids (Xaa) can be 40.

<220>
<221> VARIANT
<222> (1)
<223> Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Phe, Trp, Tyr, Met,
Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro

<220>
<221> VARIANT
<222> (17)
<223> Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Phe, Trp, Tyr, Met,
Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro

<400> 11
Xaa Leu Glu Gln Ile Trp Asn Asn Met Thr Trp Met Gln Trp Asp Lys
1 5 10 15

Xaa

<210> 12
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Variant of SEQ
ID No. 3 in which Xaa is any amino acid, that can be
added at the N-terminal or C-terminal of the sequence. The maximum number
of these added amino acids (Xaa) can be 40.

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<221> VARIANT
<222> (1)
<223> Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Phe, Trp, Tyr, Met,
Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro

<220>
<221> VARIANT
<222> (17)
<223> Xaa is any amino acid Ala, Gly, Val, Leu, Ile, Asn, Phe, Trp, Tyr, Met,
Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His, or Pro

<400> 12
Xaa Leu Thr Pro Asp Trp Asn Asn Met Thr Trp Gln Glu Trp Glu Arg
1 5 10 15

Xaa

<210> 13
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Variant of SEQ
ID No. 2

<220>
<221> VARIANT
<222> (5)
<223> Xaa is Trp, Phe or Tyr.

<220>
<221> VARIANT
<222> (10)
<223> Xaa is Trp, Phe or Tyr.

<220>
<221> VARIANT
<222> (13)
<223> Xaa is Trp, Phe or Tyr.

<400> 13
Leu Glu Gln Ile Xaa Asn Asn Met Thr Xaa Met Gln Xaa Asp Lys
1 5 10 15

<210> 14
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Variant of SEQ
ID No. 3

<220>
<221> VARIANT
<222> (5)
<223> Xaa is Trp, Phe or Tyr.

<220>
<221> VARIANT
<222> (10)
<223> Xaa is Trp, Phe or Tyr.

<220>
<221> VARIANT
<222> (13)
<223> Xaa is Trp, Phe or Tyr.

<400> 14
Leu Thr Pro Asp Xaa Asn Asn Met Thr Xaa Gln Glu Xaa Glu Arg
1 5 10 15

<210> 15
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Variant of SEQ
ID No 2

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<221> VARIANT
<222> (7)
<223> Xaa is Ala, Gly, Val, Leu, Ile, Phe, Trp, Tyr, Met,
Cys, Ser, Thr, Gln, Glu, Asp, Lys, Arg, His or Pro

<400> 15
Leu Glu Gln Ile Trp Asn Xaa Met Thr Trp Met Gln Trp Asp Lys
1 5 10 15

<210> 16

<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Variant of SEQ
ID No. 2

<220>
<221> VARIANT
<222> (9)
<223> Xaa is Ala, Gly, Val, Leu, Ile, Phe, Trp, Tyr, Met,
Cys, Gln, Asp, Glu, Lys, Arg, His or Pro

<400> 16
Leu Glu Gln Ile Trp Asn Asn Met Xaa Trp Met Gln Trp Asp Lys
1 5 10 15

<210> 17
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Variant of SEQ
ID No. 3

<220>
<221> VARIANT
<222> (7)
<223> Xaa is Ala, Gly, Val, Leu, Ile, Phe, Trp, Tyr, Met,
Cys, Ser, Thr, Gln, Asp, Glu, Lys, Arg, His or Pro

<400> 17
Leu Thr Pro Asp Trp Asn Xaa Met Thr Trp Gln Glu Trp Glu Arg
1 5 10 15

<210> 18
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Variant of SEQ
ID No. 3

<220>
<221> VARIANT
<222> (9)
<223> Xaa is Ala, Gly, Val, Leu, Ile, Phe, Trp, Tyr, Met,
Cys, Gln, Asp, Glu, Lys, Arg, His or Pro

<400> 18

Leu Thr Pro Asp Trp Asn Asn Met Xaa Trp Gln Glu Trp Glu Arg
 1 5 10 15

<210> 19
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Nucleic acid
 of SEQ ID No. 2

<400> 19 45
 ctggagcaga tctggaacaa catgacctgg atgcagtggg acaag

<210> 20
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Nucleid Acid
 of SEQ ID No. 2

<400> 20 45
 ctggaacaga tttggaataa catgacctgg atggagtggg acaga

<210> 21
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Caveolin binding domain corresponding
 to amino acids 619 to 633 of HIV-1

<400> 21 45
 ctggaacaga tttggaataa catgacctgg atgcagtggg acaaa